

Having thus described the invention, it is claimed:

1. A device for maintaining composite materials substantially separate within a chamber, comprising:
  - 5 a housing including the chamber, wherein the chamber contains a first composite material, a second composite material, and a partition inserted therebetween; wherein the partition is operable to move within the chamber while maintaining the first composite material substantially separate from the second composite material; and,
  - 10 wherein the partition is operable to permit fluid communication between the first composite material and the second composite material.
2. The device of claim 1, wherein the partition comprises a rigid plate with a plurality of ribs attached thereto;
  - 15 wherein the rigid plate fits within the chamber along a plane substantially perpendicular to a longitudinal axis of the chamber; wherein external dimensions of the rigid plate are slightly less than internal dimensions of the chamber in the plane perpendicular to the longitudinal axis of the chamber; and,
  - 20 wherein the plurality of ribs is operable to maintain the rigid plate substantially perpendicular to the longitudinal axis of the chamber.
3. The device of claim 2, wherein each rib is attached substantially at an outer perimeter of the rigid plate.
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4. The device of claim 3, wherein each rib is substantially parallel to a longitudinal axis of the chamber.

5. A device for capturing and storing evaporative emissions, comprising a housing; said housing including a chamber containing a first composite material, a second composite material, and a partition therebetween; wherein the partition substantially separates the first composite material and the second composite material; and, wherein the partition is operable to move within the chamber while maintaining the first composite material substantially separate from the second composite material.
6. The device of claim 5, wherein the partition is operable to permit fluid communication between the first composite material and the second composite material.
7. The device of claim 6, wherein the partition comprises a rigid plate with a plurality of ribs attached thereto; wherein the rigid plate fits within the chamber along a plane substantially perpendicular to a longitudinal axis of the chamber; wherein external dimensions of the rigid plate are slightly less than internal dimensions of the chamber in the plane perpendicular to the longitudinal axis of the chamber; and, wherein the plurality of ribs is operable to maintain the rigid plate substantially perpendicular to the longitudinal axis of the chamber.
8. The device of claim 7, wherein each rib is attached substantially at an outer perimeter of the rigid plate.
9. The device of claim 8, wherein each rib is substantially parallel to a longitudinal axis of the chamber.
10. The device of claim 5, further comprising a first end and a second end of the chamber; wherein the second end of the chamber comprises a device operable to exert a compressive force on the second composite material.

11. The device of claim 10, wherein the partition is operable to transfer at least a portion of the compressive force exerted by the second end of the chamber to the first composite material.

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12. The device of claim 11, wherein the first composite material is operable to capture and store at least a portion of evaporative emissions.

13. The device of claim 12, wherein the second composite material is operable to capture and store at least a portion of evaporative emissions.

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14. A partition for maintaining a first composite material substantially separate from a second composite material within a chamber, comprising:  
a rigid plate with a plurality of ribs attached thereto;

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wherein the rigid plate is inserted within the chamber along a plane substantially perpendicular to a longitudinal axis of the chamber;

wherein external dimensions of the rigid plate are slightly less than internal dimensions of the chamber in the plane substantially perpendicular to the longitudinal axis of the chamber;

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wherein the plurality of ribs is operable to maintain the rigid plate substantially perpendicular to the longitudinal axis of the chamber; and,  
wherein the partition is operable to move within the chamber.

15. The partition of claim 14, wherein each rib is attached substantially at an outer perimeter of the rigid plate.

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16. The partition of claim 15, wherein each rib is substantially parallel to the longitudinal axis of the chamber.

17. The partition of claim 14, wherein the partition is operable to move within the chamber comprises: the partition is operable to transfer at least a portion of a compressive force exerted on the second composite material to the first composite material.

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18. The partition of claim 17, wherein the partition is operable to permit fluid communication between the first composite material and the second composite material.

10 19. The partition of claim 18, wherein the first composite material is operable to capture and store at least a portion of evaporative emissions.

20. A method to maintain a first composite material substantially separate from a second composite material, each contained within a chamber, comprising:

inserting a partition into the chamber between the first composite material and the second composite material;

5 wherein said partition is operable to move within the chamber while maintaining the first composite material substantially separate from the second composite material;

wherein said partition comprises a rigid plate with a plurality of ribs attached thereto;

10 wherein the rigid plate fits within the chamber along a plane substantially perpendicular to a longitudinal axis of the chamber;

wherein external dimensions of the rigid plate are slightly less than internal dimensions of the chamber in the plane substantially perpendicular to the longitudinal axis of the chamber;

15 wherein each rib is attached substantially at an outer perimeter of the rigid plate;

wherein each rib is substantially parallel to the longitudinal axis of the chamber; and,

20 wherein the plurality of ribs is operable to maintain the rigid plate substantially perpendicular to the longitudinal axis of the chamber.